

INTERNATIONAL SEARCH REPORT

International Application No

PCT/ISA 03/00396

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 D07B1/02 D04C1/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 D07B D04C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A✓	US 2 181 344 A (A.J. RICK) 28 November 1939 (1939-11-28) page 2, column 1, line 60 - line 72 ---	1,2
A✓	US 2 281 036 A (J.A. HETZEL) 28 April 1942 (1942-04-28) page 2, column 1, line 10 - line 48 ---	1
A✓	US 4 170 921 A (G.H. REPASS) 16 October 1979 (1979-10-16) cited in the application column 3, line 18 - line 63 ---	1
A✓	US 5 901 632 A (R.J. RYAN) 11 May 1999 (1999-05-11) cited in the application column 4, line 38 - column 5, line 21 column 6, line 14 - line 53 --- -/--	1,3,4



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

1 October 2003

Date of mailing of the international search report

13/10/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Goodall, C

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/00396

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 2 600 395 A (J.J. DOMOJ; S. ROSENBERG) 17 June 1952 (1952-06-17) -----</p>	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/00396

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2181344	A	28-11-1939	NONE	
US 2281036	A	28-04-1942	NONE	
US 4170921	A	16-10-1979	NONE	
US 5901632	A	11-05-1999	US 5931076 A	03-08-1999
US 2600395	A	17-06-1952	NONE	